

**What is claimed is:**

1. 1. High-voltage direct current cable semiconductive shield comprising:
  - 2 a blend of or which is made from a blend of
    - 3 (a) at least one ethylene copolymer having a density of less than about 0.900grams/cubic centimeter, a melt index of from about 0.5 to about 10grams/10 minutes, a crystallinity of less than about 10 percent and a catalyst residue of less than about 1000 ppm;
    - 7 (b) a carbon black having a low level of ionic species;
    - 8 (c) at least one polar polymer modifier in an amount effective to provide a semiconductive shield made with the blend with an enhanced field conductivity and enhanced space charge leakage at high fields relative to a semiconductive shield made with a blend which does not include a polar polymer modifier; and
    - 12 (d) at least one ion scavenger in an amount effective to reduce ionic mobility relative to a semiconductive shield made with a blend, which does not include an ion scavenger.
  - 13 2. A high-voltage direct current cable semiconductive shield according to Claim 1,  
14 wherein the ethylene copolymer is selected from the group consisting of
    - 3 (a) ethylene/alpha olefin copolymers and
    - 4 (b) nonpolar, low crystalline ethylene copolymers selected from the group consisting of ethylene/propylene copolymer and ethylene/styrene copolymer and mixtures thereof.
  - 1 3. The high-voltage direct current semiconductive shield of claims 1 or 2, wherein  
2 the blend further includes at least one heat stabilizer.
  - 1 4. The high-voltage direct current semiconductive shield of any of claims 1 - 3,  
2 wherein
    - 3 (a) the polar polymer modifier is selected from the group consisting of (i) a polymer having a density of less than 0.900grams/cubic centimeter with at least one side group selected from the group consisting of hydroxyl, carboxyl, styrenic; (ii) a polymer having a density of less than 0.900grams/cubic centimeter and at least one side group which is a

8 residue of maleic anhydride, vinyl acetate or vinyl acrylate; (iii) a  
9 polylactone resin and; (iv) mixtures thereof, and

10 (b) the ion scavenger has at least one chelating group.

1 5. The high-voltage direct current semiconductive shield as recited in claim 4,  
2 wherein the ion scavenger is selected from the group consisting of 1,2-bis(3,5-di-tert-  
3 butyl-4-hydroxyhydrocinnamoyl)hydrazine, poly[[6-[1,1,3,3-tetramethylbutyl]amino]-  
4 s-triazine-2,4-diyl] [2,2,6,6-tetramethyl-4-piperidyl]imino]hexamethylene[(2,2,6,6-  
5 tetramethyl-4-piperidyl)imino]] N,N'-bis(0-hydroxybenzal) oxalydihydride, barbituric  
6 acid, tertiary phosphorous acid ester of a thiobisphenol, and N,N'-diphenyloxamid,  
7 and mixtures thereof.

1 6. The high-voltage direct current semiconductive shield of any one of claims 1 -  
2 5, wherein the ethylene copolymer is crosslinked.